

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

RESOLUTION NO. 70-20

PREScribing REQUIREMENTS AS TO THE NATURE OF ONE PROPOSED AND THREE EXISTING WASTE DISCHARGES BY INDUSTRIAL CHEMICALS DIVISION ALLIED CHEMICAL CORPORATION INTO SUISUN BAY AND ONTO LAND ABOUT ONE-HALF MILE EAST OF MIDDLE POINT NEAR PORT CHICAGO, CONTRA COSTA COUNTY, AND AMENDING RESOLUTION NO. 68-41

WHEREAS THIS REGIONAL BOARD HAS CONSIDERED

REPORT ON WASTE DISCHARGE

1. Industrial Chemicals Division of Allied Chemical Corporation, called the discharger below, filed a Report on Waste Discharge dated January 7, 1970, with this Regional Water Quality Control Board to inform it of changes in the nature and the proposed change in discharge point of certain wastes, pursuant to Section 13260(b) of the California Water Code. The waste discharges as they now exist are regulated by requirements which the Regional Board prescribed in Resolution No. 68-41 for wastes described therein as Wastes "A", "B", and "D". Wastes "C" and "E" as defined in Resolution No. 68-41 have been discontinued.
2. That Report and other data describe these waste discharges as follows:

- a. Waste "I" is about four mgd of sewage mixed with industrial waste, and will result from combining Wastes "A" and "B" as defined in Resolution No. 68-41. The sewage originates from a total working force of 120 and is treated in five septic tanks. The industrial waste originates from manufacturing acetic acid, alum, ammonium fluoride, ammonium hydroxide, hydrochloric acid, hydrofluoric acid, nitric acid, and sulfuric acid; it is partially treated by neutralizing and settling.

The discharger proposes to improve his waste treatment by disinfecting the septic tank effluent and providing more neutralizing for the industrial wastes, and discharge the wastes to a deep-water outfall into Suisun Bay about 20 feet below mean lower low water and about 300 feet off its south shore at his plant. The outfall is to be a 12-inch pipe having two horizontal ports, and is identified herein as Outfall "I".

- b. Waste "II" contains industrial waste from manufacturing hydrofluoric acid and will contain all of the sewage component of Waste "I" when discharged. It is and will continue to be treated by neutralizing with lime slurry and settling in four diked ponds having a combined area of five acres. The ponds are used alternately in sets of two ponds in series flow. They are east of the discharger's main process area and extend to within about 200 feet of Suisun Bay.

Supernatant liquid and seepage is to be discharged as part of Waste "I". The residual settled solids and their entrained liquid are confined within the ponds, which are collectively identified herein as Land Disposal Site "L-II".

- c. Waste "III" is industrial waste only from manufacturing alum and is discharged intermittently at an average flow rate of 50,000 gallons per week into a diked, eight-acre evaporation pond. That pond is north of the discharger's main process area, extends to within about 300 feet of Suisun Bay, and is identified herein as Land Disposal Site "L-III". This waste is identified as Waste "D" in Resolution No. 68-41.
- d. Waste "IV" is industrial waste only, consisting of timbers, masonry rubble, discarded process equipment, and similar matter from demolished or discontinued facilities formerly used at the discharger's plant. This waste is confined to a dump area north of the discharger's main process area, extends to within about 150 feet of Suisun Bay. The dump area is identified herein as Land Disposal Site "L-IV".

CORRESPONDENCE

This Regional Board has considered recommendations about this matter from:

- 1. Memoranda from State Department of Fish and Game, dated July 29 and August 5, 1968.
- 2. Memoranda from State Department of Public Health, dated May 14, 1968 and March 25, 1970.
- 3. Memorandum from State Department of Water Resources, dated May 17, 1968.
- 4. Letter from Solano County Department of Public Health, dated April 30, 1968.
- 5. Letter from Bay Area Air Pollution Control District, dated May 2, 1968.

STAFF INVESTIGATION

- 1. These waste discharges can affect the following existing and proposed beneficial water uses of Suisun Bay:

Seasonal source of domestic water supply at Antioch and at
Mallard Slough

Industrial cooling and process water supply year-round

Swimming, water-skiing, wading, pleasure boating, marinas, fishing,
and hunting

Fish, shellfish, and wildlife propagation and sustenance, and
waterfowl and migratory birds habitat and resting

Navigation channels and port facilities

Esthetic enjoyment.

2. Land within 2000 feet of the waste discharge outfall is used for cattle pasture, industry, and transportation.
3. The wastes in Land Disposal Sites "L-II", "L-III", and "L-IV" contain matter which the Regional Board has defined as requiring confinement in Class II dumpsites.
4. Tidal waters east of the westerly end of Chipps Island have been available for domestic, industrial, and agricultural water supplies such that the mean tidal cycle chloride concentrations at Chipps Island have not exceeded 150 mg/L for an average of 150 days between November 1 and June 30 from 1944 through 1965.

RESOLVED BY THIS REGIONAL BOARD

BOARD INTENT

1. Protect public health as it may be affected by this waste discharge.
2. Prevent nuisance, as defined in Section 13050(m) of the California Water Code.
3. Protect the beneficial water uses listed under "Staff Investigation" above.

WASTE DISCHARGE REQUIREMENTS - RECEIVING WATERS

1. The treatment or disposal of wastes shall not create a nuisance as defined in Section 13050(m) of the California Water Code.
2. The discharges shall not:
 - a. Unreasonably affect any of the protected beneficial water uses resulting from:

Floating, suspended, or deposited macroscopic particulate matter, or foam in waters of the State at any place;

Bottom deposits at any place;

Aquatic growths at any place;

Alteration of temperature, color or turbidity beyond present natural background levels in waters of the State at any place.
 - b. Cause visible, floating, suspended or deposited oil or other products of petroleum origin in waters of the State at any place.

- c. Cause waters of the State to exceed the following limits of quality at any point within one foot of the water surface:

pH	7.0 minimum 8.5 maximum
Dissolved oxygen	5.0 mg/l minimum
Dissolved sulfide	0.1 mg/l maximum
Nutrients	to be prescribed at the earliest practicable date
Ammonium hydroxide, undissociated	to be prescribed at the earliest practicable date

This Board will consider prescribing specific requirements for the concentration of Copper and Zinc in the receiving waters after enough new data has been obtained and evaluated; in the meanwhile, the Board considers the following to be receiving water quality goals for the points described above:

Copper	0.05 mg/l maximum
Zinc	0.1 mg/l maximum
Other substances	any one or more substances in concentrations that impair any of the protected beneficial water uses or make aquatic life or wildlife unfit or unpalatable for consumption.

- d. Cause bacterial concentration in waters of the State at any place within one foot of their surface to exceed the limits prescribed in Section 7958, Title 17, California Administrative Code at any time; when this bacterial concentration is exceeded in the receiving waters for any reason it shall be met instead in the waste at some point in the treatment process and the discharger may do so as an optional alternate; the Board will accept proof of effective effluent disinfection in terms of factors other than bacterial concentrations if the discharger documents a sound statistical correlation between such factors and bacterial analysis.
- e. Cause the waters of the State at any point east of the western end of Chipps Island and within 2000 feet of any diversion being used for a domestic water supply to exceed the following limits of quality:

Carbon chloroform extract	0.2 mg/l, maximum
Chromium, hexavalent	0.02 mg/l, maximum
Phenols	0.001 mg/l, maximum

The limited data available indicate that this concentration is not being met in the vicinity of Mallard Slough when it may be used as a diversion point for a domestic water supply, and that this apparent problem is not the sole responsibility of the discharger.

Upon further investigation of this matter, the Regional Board will determine whether or not correction is needed and, if so, will consider appropriate action with due regard for equitable apportionment of the necessary corrective action among the dischargers which are contributory to the problem.

WASTE DISCHARGE REQUIREMENTS - WASTE STREAMS

1. Waste "I" as discharged to waters of the State shall meet these quality limits at all times:

- a. In any grab sample:

Settleable matter in excess of that in the intake water drawn from Suisun Bay

80% of all individual samples collected during maximum daily flow over any 30-day period

0.1 ml/l/hr. maximum

Any sample

0.5 ml/l/hr. maximum

Dissolved sulfide

0.1 mg/l maximum

- b. 5-day, 20°C. BOD removal from the waste as indicated by analysis of 24-hour composite samples of effluent and influent shall be sufficient to maintain the dissolved oxygen concentration prescribed above. When the dissolved oxygen is less than the concentration prescribed above the BOD removal during the preceding 21 days shall be at least

Average

90%

Not more than two consecutive daily determinations shall indicate BOD removals less than

80%

Because of the low and variable BOD concentration of the Waste "I" influent, the Board will consider effluent BOD concentrations of 30 mg/liter as equivalent to 90% BOD removal.

- c. In any representative, 24-hour composite sample:

Toxicity: the concentration of the waste itself in the receiving waters at any point within one foot of their surface

10 percent of the 96-hour TL_m concentration of the waste as discharged, maximum

Crease

9 mg/l maximum

The discharger will be considered in compliance with this effluent grease requirement if he is in compliance both with the receiving water requirement prohibiting "... floating, suspended, or deposited ... oil, or grease ..." and with the effluent toxicity requirement prescribed above.

2. The discharge of Wastes "II", "III", and "IV" shall not cause waste materials to be in any position where they are, or can be carried from their respective Land Disposal Sites and deposited into waters of the State except for liquid portions of Waste "II" and internal drainage from Land Disposal Site "II" which are being conveyed to a point tributary to Outfall "I" for discharge as part of Waste "I".
3. Land Disposal Sites "II", "III", and "IV" shall have facilities adequate to exclude flood and tidal waters, to divert surface runoff from adjacent areas, to protect boundaries of the site from erosion, and to prevent any conditions that would cause drainage from the materials in the disposal site.

PROHIBITION

Pursuant to Section 13243 of the California Water Code this Regional Board prohibits at any time the disposal of material acceptable only at Class I waste disposal sites in Land Disposal Sites "II", "III", and "IV".

REPORTING REQUIREMENTS

This Resolution includes items numbered 1, 3, 6, and 7 of the attached "Reporting Requirements", dated January 1, 1970.

NOTIFICATIONS

1. This Resolution includes items numbered 1, 2, 3, 4, 5, and 6 of the attached "Notifications", dated January 6, 1970.
2. Those provisions of this Regional Board's Resolution No. 68-41 which pertain only to Wastes "C", "D", and "E" as defined therein are rescinded. The other provisions of Resolution No. 68-41 are amended to make the code references consistent with the California Water Code, which became operative on January 1, 1970, by substituting Section 13050(m) in place of 13005, 13267(b) and 13268 in place of 13055 and 13055.1, and other substitutions necessary to identify current code sections which contain definitions, authorize Regional Board actions, or place responsibilities upon the discharger. The Reporting Requirements and Notifications prescribed above are added to those portions of Resolution No. 68-41 which remain in effect.

WILLIAM C. WEBER
Chairman

March 26, 1970

I, Fred H. Dierker, hereby certify that the foregoing is a true and correct copy of Resolution No. 70-20 adopted by the California Regional Water Quality Control Board - San Francisco Bay Region at its regular meeting on March 26, 1970.

FRED H. DIERKER, Executive Officer
CALIFORNIA REGIONAL WATER QUALITY CONTROL
BOARD - SAN FRANCISCO BAY REGION

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION
January 1, 1970

REPORTING REQUIREMENTS

1. This Board requires the discharger to file technical reports on self-monitoring work performed according to detailed specifications developed pursuant to the Regional Board's Resolution No. 398. (Reference: Sections 13267(b) and 13268, California Water Code.)
2. This Board requires the discharger to file a written report within 90 days after the average dry-weather waste flow for any month equals or exceeds 80% of the design capacity of his waste treatment and/or disposal facilities. The discharger's senior administrative officer shall sign a letter which transmits that report and certifies that the policy-making body is adequately informed about it. The report shall include:

Average daily flow for the month, the date on which the instantaneous peak flow occurred, the rate of that peak flow, and the total flow for that day.

The discharger's best estimate of when the average daily dry-weather flow rate will equal or exceed the design capacity of his facilities.

The discharger's intended schedule for studies, design, and other steps needed to provide additional capacity for his waste treatment and/or disposal facilities before the waste flow rate equals the capacity of present units. (Reference: Sections 13260, 13267(b) and 13268, California Water Code.)

3. This Board requires the discharger to file a time schedule for engineering studies on facilities needed to comply with the Board's receiving water objective of 5.0 mg/l of dissolved oxygen and/or to file a time schedule for deciding upon the feasibility of participating in regional water quality control systems if he does not meet that dissolved oxygen objective after providing waste treatment facilities which comply with the effluent BOD requirement prescribed elsewhere in this Resolution. (Reference: Sections 13267(b) and 13268, California Water Code.)
4. This Board requires the discharger to file technical reports on studies into correcting violations of the Board's water quality objectives caused by discharging combined storm water and sewage. Specifications for these studies shall be developed pursuant to the Board's Resolution No. 398. (Reference: Sections 13267(b) and 13268, California Water Code.)

5. This Board requires the discharger to file written reports within 15 days after each calendar quarter to include:

Name of and number of lots in each subdivision for which an application has been received for connection to the sewerage system.
Anticipated date of connection of each subdivision to the sewerage system.

Finding and supporting data by governing body on effect of addition of each subdivision on violation of waste discharge requirements.

(Reference: Section 11551.6 Business and Professions Code and Sections 13267(b) and 13268, California Water Code.)

6. This Board requires the discharger to file a report on waste discharge at least 120 days before making any material change or proposed change in the character, location or volume of the discharge. (Reference: Sections 13260(b) and 13264, California Water Code.)
7. This Board requires the discharger to file a written technical report at least 15 days prior to advertising for bids on any construction project which would cause or aggravate the discharge of waste in violation of these requirements; said report to describe the nature, costs, and scheduling of all actions necessary to preclude such discharge. In no case should any discharge of sewage bearing wastes be permitted without at least primary treatment and chlorination. (Reference: Sections 13267(b) and 13268, California Water Code.)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION
January 6, 1970

NOTIFICATIONS

1. This Board requests the discharger to take note of the comments and recommendations contained in all the correspondence the Board has received and considered concerning this matter, and the Executive Officer is directed to transmit copies of that correspondence to the discharger.
2. This Board considers "Waters of the State" as defined in Section 13050(e) of the California Water Code to include waste waters over which the discharger has lost control.
3. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, nor protect the discharger from his liabilities under Federal, State, or local laws, nor guarantee the discharger a capacity right in the receiving waters.
4. This Board will prescribe more restrictive requirements for this waste discharge if necessary:

To achieve or maintain dissolved oxygen concentration of at least 5.0 mg/l in tidal waters of the San Francisco Bay System pursuant to Resolution No. 67-30,

To protect shellfishing areas which the Board designates pursuant to Resolution No. 803,

To protect the beneficial water uses, and to achieve other objectives adopted in the resolutions cited above.
5. This Board will review these requirements periodically, as required by law, and will notify the responsible persons before doing so. (Reference: Section 13263(e), California Water Code.)
6. The water quality parameters used in this resolution are as defined in the latest edition of "Standard Methods for the Examination of Water and Wastewater" by the American Public Health Association.
7. The discharger is advised that this Board will use the general concepts of Phase I of the plan recommended by the Final San Francisco Bay-Delta Program Report as guidelines in reviewing any application for construction grants for sewerage facilities proposed to comply with these requirements, and if the discharger intends to make such application he must demonstrate the compatibility of the proposed facilities with the general concepts of the Bay-Delta Program.